

Exhibit 33

STATE OF WISCONSIN : CIRCUIT COURT : MANITOWOC COUNTY
BRANCH 1

STATE OF WISCONSIN,

PLAINTIFF,

JURY TRIAL
TRIAL DAY 13

vs.

Case No. 05 CF 381

STEVEN A. AVERY,

DEFENDANT.

DATE: FEBRUARY 28, 2007

BEFORE: HON. PATRICK L. WILLIS
Circuit Court Judge

APPEARANCES:

KENNETH R. KRATZ
Special Prosecutor
On behalf of the State of Wisconsin.

THOMAS FALLON
Special Prosecutor
On behalf of the State of Wisconsin.

NORMAN A. GAHN
Special Prosecutor
On behalf of the State of Wisconsin.

DEAN STRANG
Attorney at Law
On behalf of the defendant.

JEROME BUTING
Attorney at Law
On behalf of the defendant.

STEVEN A. AVERY
Defendant
Appeared in person.

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1 Q And we're going to show you, um, a photograph. I
2 believe it's been received as Exhibit 86.
3 Directing your atten -- uh, attention to Exhibit
4 86, we're zooming in on what has previously been
5 identified as the, uh, portion of the property
6 attributed to Mr. Avery.

7 Um, directing your attention, then, to
8 Exhibit 86, does that assist you in illustrating
9 where your attention was drawn to by, uh, Deputy
10 Jost?

11 A Yes, it does.

12 Q All right. Would you, with the laser pointer,
13 indicate, uh, where you and Deputy Jost were,
14 uh -- where your attention was drawn to?

15 A If this is -- this -- this is the earthen pile here,
16 we were standing just beyond it about, uh, eight
17 feet, um, beyond that earthen pile.

18 ATTORNEY FALLON: Would the record
19 reflect the, uh, witness has indicated with the
20 laser pointer, uh, a direction a few feet,
21 apparently, uh, eight feet south of the pile,
22 which would be the top of the picture, uh, as
23 zoomed in here on Exhibit 86?

24 THE COURT: Does the defense agree?

25 ATTORNEY STRANG: I don't have any

1 quarrel. It's up to the jury in the end.

2 THE COURT: All right. Uh, the record will
3 so reflect.

4 ATTORNEY FALLON: Thank you.

5 Q (By Attorney Fallon) After Deputy Jost do --
6 drew your attention to this particular, um,
7 matter, um, first of all, could you describe a
8 little more fully what you and he were looking at
9 at that point?

10 A Excuse me. Deputy Jost was standing in front of what
11 appeared to be, in my opinion, a piece of bone
12 fragment. It was approximately one inch in length.
13 And, um, my opinion was, and I think we kind of
14 agreed, that it was a, uh -- a -- a piece of bone
15 fragment. And after looking at that, I looked at
16 this so-called burn pit at the end of that pile of
17 gravel and also noticed other -- what in my opinion
18 were bone fragments, um, that were obvious, uh,
19 around that, uh, pile of debris.

20 Q All right. And, um, I'd like to, uh, show you
21 some exhibits now. While we retrieve one exhibit
22 already introduced, I'm going to have Agent
23 Fassbender provide some additional photos for
24 your examination.

25 First of all, though, before we look at

1 those photos, I'd like to direct your attention
2 to Exhibit No. 50 as, um -- as portrayed on the
3 scene. Do you recognize that particular area?

4 A Yes.

5 Q Is that a photograph of how the burn area looked
6 when, uh, you first, um, began to inspect it?

7 A That is correct.

8 Q All right. And I note that there is a, uh,
9 German Shepherd, uh, prominently featured in the
10 center of this photograph?

11 A That is correct. It was a large, uh, in my opinion,
12 intimidating, big German Shepherd that stood on top
13 of that pile.

14 Q All right. And, um, was that, uh, German
15 Shepherd there when you first approached the area
16 to, uh, examine the article found by Deputy Jost?

17 A Yes, he was.

18 Q All right. Now, you indicated the dog was large
19 and intimidating. Could you elaborate on that?

20 A As you walked towards the mound of dirt, the dog
21 would come out and, um -- and, at times, um,
22 aggressively, um, charge towards the people that were
23 walking towards the earthen pile.

24 Q All right. Um, I believe we have some additional
25 photographs in front of you? So would you take

1 the first one on the pile, uh, turn it over, and
2 tell us what exhibit number that is?

3 A Exhibit 363.

4 Q All right. And do you recognize Exhibit 363?

5 A I do.

6 Q And what is Exhibit 363?

7 A It is a picture of -- of the dog, the earthen pile,
8 and this is a pile of, uh, sand, rock, and stone that
9 stood probably a, uh, foot to two feet above the
10 grass where the natural landscape.

11 Um, and the left -- or the low left-hand
12 corner of this, you can see in part of the burn
13 pit, um, can see the hammer that was, uh -- was
14 at the site as well, as well as the burned out
15 frame -- uh, what appeared to me a metal frame
16 seat from a motor vehicle, and lots of
17 steel-belted, uh, wire from what I thought
18 were -- were -- were steel-belted tires.

19 Q Very well. I'm going to have, um, uh -- go back
20 to Exhibit No. 50, and, um, see if we can get a
21 perspective that I'd like you to identify.

22 Again, looking at Exhibit 50, can you
23 indicate with your laser pointer the approximate
24 location of the first bone that you and Deputy
25 Jost, um, examined?

1 A The first -- the first bone is approximately out
2 here. It's about eight feet, as I estimated, from
3 the beginning of the burn pit.

4 Q All right. So it would be in -- in -- what is in
5 our picture here, would be in the -- the front
6 foreground of the picture?

7 A That's correct. It would actually be in the grassy
8 area away from the burn pit.

9 Q And that would be, uh -- So as you indicated with
10 your pointer, the, uh, lower right-hand corner of
11 the photograph?

12 A That is correct.

13 Q Thank you. All right. Uh, again, and, um, to,
14 uh, direct your attention to the next, uh,
15 photograph, uh, which has been -- The photographs
16 have been presented to you there. What's the,
17 uh -- the next photograph that, uh, you have?

18 A Exhibit 364.

19 Q All right. And what is Exhibit 364?

20 A Exhibit 364 is a -- just a different angle, um, of
21 the earthen burn, if you will. Um, you can see the
22 doghouse within that, um, and you can see the metal
23 seat, the burned out metal seat, um, metal frame of
24 the vehicle seat if -- in my opinion.

25 Q All right.

1 A Um, and you can see the -- you can see the pile.
2 This is the pile of sand and gravel that stood above
3 the landscape, and the doghouse.

4 Q All right. And there's also a propane tank
5 prominently featured in this photograph?

6 A That is correct.

7 Q All right. And, uh, the next photograph?

8 A Next exhibit is, uh, 365.

9 Q Do you recognize Exhibit 365?

10 A I do.

11 Q Okay. And Exhibit 365 is what?

12 A Exhibit 365, um, represents what I initially saw.
13 Um, the bone was out here that I initially looked at.
14 I looked at the burn pit, walked over, this is where
15 I saw charred debris to include what I believed to
16 be, um, bone fragments, a shovel, um, the large dog,
17 a seat, a -- a tire out here, lots of, um -- in my
18 opinion, lots of, um, steel belts from burned tires.
19 I believe there was a hammer in here,
20 but, uh, this -- this is -- would be the debris
21 that I focused on right here.

22 Q Uh, does that -- uh, again, does that picture, as
23 does, uh, the last exhibit, truly and accurately
24 portray the scene before any, uh, further
25 investigation took place?

1 A Yes, it does.

2 Q All right. Now, um, you began to describe -- And
3 I think we may have interrupted you. Can you
4 estimate for us the approximate size of the area
5 where the burn is, itself, in terms of its, uh,
6 dimensions?

7 A I estimated this pile of dirt to be 30 feet by
8 30 feet. It was easily the width of this garage, and
9 I estimated it to be about 30 feet in length.

10 In the center of this pit -- We'll
11 consider this the bottom of the south side, if
12 you will, is a burn pit right here. Was a -- I
13 described that as being six feet in rectangular
14 shape. It appeared to me as though somebody had
15 taken a, um -- some sort of a construction
16 vehicle with a front end loader on it, and gone
17 in there and taken approximately six feet of that
18 out and created a concave area that looked just
19 like a -- a -- a pit.

20 Um, so it was, again, about six feet
21 wide, looked like somebody had taken a big shovel
22 from a bobcat or a front end loader and scooped
23 out dirt, and removed it, and -- and, um, dumped
24 it elsewhere.

25 Q All right. Now, I note in the -- in the far

1 background of this picture, we're going to zoom
2 in, um, is there a vehicle depicted there?
3 A Yes, there is.
4 Q All right. And was that vehicle, uh, in the area
5 as well?
6 A I do not recall.
7 Q Okay. All right. Next photograph, please?
8 A Next Exhibit is 366.
9 Q What is Exhibit 366?
10 A Again, this, uh, depicts the, uh -- a portion of the,
11 um, pile of dirt, as well as, um, I believe to be
12 that -- uh, Steven Avery's trailer, the, uh, propane
13 tank and a portion of the, uh, detached, uh, two-car
14 garage.
15 Q And, uh, in -- in the foreground in front of the
16 garage is a red box-like item? What is that?
17 A Yes. That would be the doghouse.
18 Q All right. And, again, is that, generally, the
19 layout of the scene and the burn area of -- uh,
20 when you came upon the scene, on Tuesday
21 afternoon, November 8?
22 A Yes, it is.
23 Q All right. Very well. Um -- All right. Let's
24 talk, uh, again, about what you did after you and
25 Deputy Jost examined this particular, um, um,

1 bone fragment? What did you do?

2 A After looking at the bone fragment, I then walked
3 towards this burn pit. So I walked from the bone --
4 from the, uh -- the piece of bone fragment out here
5 to the burn pit. I looked at the burn pit. I
6 observed what I thought were other bone fragments in
7 and around that burn pit. I picked up a twig. I
8 moved some leaves and other things, and I could see
9 other bone fragments within that -- within the
10 charred debris. Um, I noticed what I believed to be,
11 uh, skull fragments, uh, in that debris and
12 intertwined within the steel-belted tires.

13 Um, aside from that, I didn't do much
14 with that burn pit. Um, at that point we were
15 trying to, uh, uh, get in contact with the, uh --
16 the, uh, folks from the Crime Lab, as well as
17 some of our arson folks.

18 Q All right. And, uh, were you able to, uh, get a
19 hold of anyone in the Arson Bureau, uh, that
20 particular afternoon?

21 A Myself and another agent were, uh, trying to contact,
22 uh, the arson folks. I spoke with Kevin Heimerl. I
23 believe Deb Straus -- Straus spoke with the -- I
24 think, uh, Special Agent Fassbender, as well as one
25 of our other arson agents that happened to be, um,

1 working the investigation.

2 Q All right. And, um, you mentioned something
3 about the Crime Lab? Tell us about their
4 involvement if any?

5 A Um, and we -- we attempted, um, to get those folks to
6 the, uh -- to the scene. I understood that the Crime
7 Lab was busy retrieving or collecting other, um,
8 evidence from burn barrels and so forth, so that they
9 would not be available for a bit. Um, the arson
10 agents that we spoke with were also busy, um, with
11 other, um, investigative activities, uh, so we, uh --
12 we waited for the, uh, Crime Lab to, uh, show up.

13 Q All right. And, um, at approximately three p.m.,
14 were you assisted by members of the Crime Lab?

15 A Yes. Uh, I don't have the exact time, but at some
16 point later on, um, in the afternoon, the Crime Lab
17 did show up. Um, I believe it was John Ertl, Guang
18 Zhang, um, and Chuck Cates who arrived with a van and
19 set up a sifting apparatus, a large sifting
20 apparatus, on a tripod that required two and three
21 people to assemble it.

22 Q All right. And, um, after they came with their
23 equipment -- Well, first of all, before they came
24 with their equipment, were -- were there -- was
25 there anything removed, or any shovels taken to

1 that pit, anything disturbed in the fire pit
2 area, before the arrival of the Crime Lab, by
3 yourself or any other law enforcement officer in
4 your presence?

5 A Nothing was introduced, um, between the time that we
6 discovered the pit and the time that the Crime Lab
7 arrived. We did not have proper equipment, gloves
8 or, uh, proper clothing to, uh -- to, uh, process
9 that.

10 Q Did the Crime Lab provide the necessary equipment
11 to begin processing?

12 A They did.

13 Q In addition to, um -- Tell us about the sifting
14 apparatus?

15 A Well, the sifting apparatus is a large tripod that
16 has these large, I think they're maybe three foot in
17 length, a couple of feet wide, different strains of
18 different sizes so the debris, as you -- as you moved
19 it around, certain things would fall through, certain
20 things would remain above.

21 And so as -- After setting that up
22 and -- and getting it all set up, we then took
23 the debris from that debris pile, put it on top
24 or shoveled it on top of these screens as in
25 sifted through it, and, again, the small

1 particles would fall through, the large ones
2 would remain.

3 There were two different types of
4 strains. And we picked out what we thought were
5 bone fragments. Um, other things to include
6 metal grommets, as well as a, uh, zipper. And
7 all of those items that -- Again, we -- I'm not
8 an anthropologist. I'm not trained in that
9 field. We picked out things that we thought
10 might be bone fragments, to include teeth, and
11 placed them in a box which was then, um, taken by
12 the Crime Lab.

13 Q I'm going to have an exhibit marked, for your,
14 uh, examination, by Investigator Wiegert.

15 (Exhibit No. 373 marked for identification.)

16 ATTORNEY FALLON: Want to -- Would you
17 show Counsel, please?

18 Q (By Attorney Fallon) I'm showing you what has
19 been marked for identification purposes as
20 Exhibit 360 --

21 THE CLERK: Three hundred seventy-three.

22 Q (By Attorney Fallon) -- 373. Sorry. Do you
23 recognize that particular item?

24 A I do. It's the, uh -- the zipper that was retrieved
25 from the debris as we sifted through it and placed in

1 a larger box.

2 Q All right. Very well. I'm -- I'm going to have
3 you place that back in the box and have, uh,
4 Investigator Wiegert put it on the, uh, ELMO for
5 projection.

6 ATTORNEY FALLON: Leave it in the box
7 unless you don't think it will portray. Could
8 you zoom and adjust that light for us,
9 Investigator? Little out of focus. You'll have
10 to zoom out. Very good.

11 Q (By Attorney Fallon) Is, uh, portrayed on this,
12 uh, screen now for the benefit of our jurors, is
13 that the, uh -- the piece of zipper that you, uh,
14 discovered?

15 A Yes, it is.

16 Q Thank you. In your examination of that zipper,
17 did you notice any markings on that zipper?

18 A Yes. There were three letters on the zipper.

19 Q And do you recall those letters?

20 A I don't recall them, no.

21 Q I'll have the Investigator show you the exhibit.
22 Would a pair of reading glasses assist you?

23 A They -- they might. Thank you.

24 Q Age is a terrible thing, isn't it?

25 ATTORNEY STRANG: It's better than the

1 alternative.

2 THE WITNESS: The letters are Y, K, K.

3 Q (By Attorney Fallon) Thank you. Approximately
4 how long did this, uh, sifting, um, process, uh,
5 take?

6 A The sifting process went on until, uh, just about
7 dark. Um, because of the darkness we were, um,
8 moving along, um, rapidly, trying to get -- we were
9 trying to retrieve, um, as much of the bones that we
10 could recognize and get those things to the Crime Lab
11 for examination.

12 Q All right. And why was that?

13 A Well, at this point in time, quite frankly, we don't
14 know if Teresa Halbach is alive or dead. So I had
15 made the decision that we need to get these bones,
16 um, off to the Crime Lab to determine whether or not
17 these bones were human bones and belonged to Teresa
18 Halbach.

19 Q And, um, generally, how did you and, uh,
20 Mr. Ertl, and, uh, Mr. Zhang, and Mr. Cates, and
21 I think you were -- said you were assisted by
22 Agent Straus?

23 A No. In terms of the sifting?

24 Q Yes.

25 A The sifting involved, uh, John Ertl, Chuck Cates,

1 and -- and, uh, uh, Guang Zhang from the Crime Lab,
2 myself and -- and Deputy, uh, Jason Jost.

3 Q Okay. And, um, how did the, um -- how was the
4 material taken from the pit and brought to the,
5 um, sifting apparatus?

6 A We set up the tripod. The tripod was, uh, just a
7 short ways from the burn pit, if you will. Um, might
8 have been, uh, maybe six feet from the burn pit. So
9 you've got this tripod device set up, you've got
10 these long, um -- elongated sifting devices that were
11 supported by -- by, uh, chains, and beneath that we
12 put a brown tarp.

13 John Ertl, or someone else from the
14 Crime Lab, took the shovelful of debris up,
15 placed it on top of the sifter. As we spread it
16 out with our -- with our hands and with our
17 gloves, and we sifted through it and picked out
18 those things that we felt were either bones, in
19 some cases the metal grommets, and the, uh -- the
20 zipper that, uh -- that we could discern, uh,
21 from -- from the pile of debris.

22 Other things -- you know, things that
23 fell through were placed on -- or fell to the
24 tarp. Um, the debris that could not fall through
25 was picked up and then dumped on that tarp. So

1 everything that we sifted was collected on top of
2 that tarp.

3 Other things like, uh, maybe a seat
4 belt, a metal seat belt fastener was -- was left
5 there, a hacksaw blade, other things that came
6 out of that debris, to include the, uh -- the
7 steel-belted, uh, uh, metal from the tires, that
8 was left there as well.

9 Um, so we -- we always sifted those
10 things that fit on the shovel, um, and the things
11 that we took out of that were placed in a large
12 box that the Crime Lab -- Crime Lab had and took
13 with them.

14 So we did it relatively fast due to the,
15 uh, darkness, uh, impending darkness, and, um --
16 and -- and -- and, again, carefully picked the
17 stuff up, put it on top of the, uh -- the
18 sifters, and sifted through it, and picked out
19 what we thought, was, uh, bone material and other
20 items of interest.

21 Q What did you do with the material that was left
22 on the tarp?

23 A The material that was left on the tarp was picked up,
24 collected, folded inside the tarp. There was another
25 tarp placed over it, and then we double-bagged it and

1 placed it inside a locked van at the crime scene. It
2 was basically turned over to -- to, uh, Deputy, uh,
3 Rick, uh, um, Riemer from the, uh, Calumet County
4 Sheriff's Department.

5 Q What did you do with the, um -- the -- the, um,
6 burn pit area, itself, uh, when it became too
7 dark to continue the processing?

8 A We -- we examined the scene and removed the stuff
9 down -- down to the ground surface. We did not dig
10 in the ground. We left, um, other items that we
11 found there, the shovel, and the hammer, the hacksaw
12 blade, the screw driver, um, the seat belt fastener,
13 the burned out frame, the tire, and other things were
14 left at the scene. The scene was covered with a
15 tarp.

16 And my decision was, if this turned out
17 to be Teresa Halbach, and we -- and we called
18 Special Agent Fassbender, that we should then
19 come back and more thoroughly examine this scene.
20 But our intention at that point in time were to
21 determine whether or not Teresa Halbach was alive
22 or dead at that point in time, and that's why it
23 was important to me just to get those bones off
24 to the Crime Lab to see if -- if, in fact, that,
25 uh, we discovered Teresa Halbach.

1 Q All right. Did you have any other concerns
2 regarding, um, the evidence, or the weather, or
3 anything else that factored into your
4 decision-making that afternoon?

5 A Well, um, part of that, uh, you know -- I mean, the
6 bones could have been carried off by animals, there
7 were a lot of things that could have happened, to
8 include rain or other in climate weather. I didn't
9 know the forecast at the time. Um, but, uh, we --
10 we -- we did make some preparations to cover the --
11 the, uh, burn pit, um, and pick up as many bones as
12 we could to prevent, the -- you know, the loss or --
13 or being carried off by an animal. Um, so that was,
14 uh, that -- that's what I did.

15 Q All right. I think you can remove your gloves.
16 I'm sure they're getting a little uncomfortable
17 at this point.

18 A Didn't know if there was other evidence or not.

19 Q Um, if you would, uh, examine, again, the
20 remainder of the photographs in front of you,
21 what's the -- the next photograph on the list?

22 A Yeah. That would be Exhibit 367.

23 Q All right. And what is Exhibit 367, please?

24 A That is the hammer that was, uh, um, beside the burn
25 pit. Um, that, um, was sitting, um, up on the ridge.

1 If you're facing the burn pit, up on the right-hand
2 side.

3 Q In the gravel portion?

4 A Yes.

5 Q All right. And, um, what's the next photograph?

6 A The next exhibit is, uh, 368.

7 Q And what is Exhibit 368?

8 A That's the, uh, screwdriver that was also, uh,
9 located in the pit.

10 Q Was that actually in the burn area, itself, or
11 was that in the surrounding gravel?

12 A I believe this was down inside the pit.

13 Q And what is the next item?

14 A Uh, a masonry trowel or a little pull, if you will.
15 And this was also, uh, in the, uh, burn pit area.

16 Q And that is Exhibit 3 --

17 A I'm sorry. Exhibit 369.

18 Q All right. And, finally, what else do you have
19 there?

20 A I got Exhibit 370 and 371. Exhibit 370, that's the,
21 uh -- the spade or shovel that was sitting on top of
22 the, uh, dirt and sand just to the left of the burn
23 pit.

24 Q All right.

25 A And the final exhibit I have is 371, and that is a

1 picture of the -- in my opinion, a -- a metal frame
2 of a, uh, seat from a motor vehicle. Um, this was
3 the seat that was seated -- If you're looking at the
4 pit, to the right of the pit, um, with, uh, a -- a
5 tire and some other -- other debris, to include the,
6 uh -- more metal from, uh, steel-belted tires.

7 Q All right. Um, and, finally, I'm going to
8 redirect your attention, I guess, back to, uh,
9 Exhibit No. 50, uh, which is one of the first
10 photographs. You don't have that in front of
11 you.

12 But, um -- Now, if we could, um, I
13 believe in Exhibit, uh, 50 there is a shovel,
14 which is depicted, uh, right there. Is that the,
15 uh, shovel that we just saw a picture of?

16 A That is correct.

17 Q All right. Very well. And, uh, in terms of the,
18 um -- I believe you have an exhibit in front of
19 you, uh, a photograph, uh, with the hammer and
20 its location?

21 A Yes. The hammer would have been located
22 approximately right here to the right of the pit
23 on -- on the, um, top of the mound.

24 Q All right. And now we have zoomed in on Exhibit
25 No. 50. Is that the, uh, hammer that we've just

1 examined in an evidence photo?

2 A That is correct.

3 Q Very well.

4 ATTORNEY FALLON: I have no further
5 questions for the witness. Subject to cross, I
6 would move into evidence the exhibits that we've
7 marked and identified during Agent Sturdivant's
8 testimony.

9 THE COURT: Any objection?

10 ATTORNEY STRANG: Uh, no objection to
11 any of the exhibits, which I think are 363
12 through 371, and then, numbers 373.

13 THE COURT: Very well. Those, um, exhibits
14 are admitted. Um, Mr. Strang?

15 ATTORNEY STRANG: Thank you, Your Honor.

16 **CROSS-EXAMINATION**

17 BY ATTORNEY STRANG:

18 Q Good morning.

19 A Morning, sir.

20 Q How many days were you out at the Avery property?

21 A I was out there, uh, one day, fully, and then just,
22 uh, partially for, um, a -- a morning.

23 Q The 8th was the full day out there?

24 A Yes.

25 Q November 10 was the other day?

1 alleged by the State, but I understand your point
2 and, um, if, uh, another question is made that
3 the defense's feel objectionable, uh, object to
4 it at the time and I'll rule on it.

5 Anything else before we bring the jury
6 back in?

7 ATTORNEY STRANG: No, Your Honor.

8 ATTORNEY FALLON: I think we're just
9 waiting for the clerk to finish marking exhibits.

10 (Jurors in at 1:10 p.m.)

11 THE COURT: You may be seated, and, uh,
12 Mr. Fallon, you may call your next witness.

13 ATTORNEY FALLON: State would call
14 Leslie Eisenberg.

15 THE CLERK: You can step over there.
16 Please raise your right hand.

17 **LESLIE EISENBERG,**
18 called as a witness herein, having been first duly
19 sworn, was examined and testified as follows:

20 THE CLERK: Please be seated. Please state
21 your name and spell your last name for the record.

22 THE WITNESS: My name is Leslie Eisenberg,
23 E-i-s-e-n-b-e-r-g.

24 **DIRECT EXAMINATION**

25 BY ATTORNEY FALLON:

1 Q Good afternoon.

2 A Good afternoon.

3 Q What do you do for a living?

4 A I am currently employed, and have been since June of
5 1993, for the State of Wisconsin, Wisconsin
6 Historical Society, as the State's, uh, Burial Sites
7 Preservation Program Coordinator. I am, likewise,
8 employed privately as a forensic anthropologist.

9 Q Would you tell us what an anthropologist does?

10 A I'd be happy to. Uh, a -- an anthropologist, and in
11 particular, a forensic anthropologist, uses
12 techniques from physical anthropology, uh, including
13 knowledge of the human skeleton and knowledge of
14 human variation and applying that knowledge in a
15 legal context.

16 Q Are there any particular areas or subspecialties
17 of forensic anthropology or anything like that?

18 A Um, I, uh, have a bit of -- quite a bit of experience
19 with trauma reconstruction and with, um, identifying
20 and, um, recognizing burned human remains.

21 ATTORNEY FALLON: Um, Judge, either the
22 witness should lean back a little or if you could
23 turn the volume down a tad. She seems to be more
24 comfortable leaning forward so, perhaps, less
25 volume. Thanks.

1 THE COURT: Sure.

2 Q (By Attorney Fallon) How are you involved in
3 this case?

4 A I was, uh -- In early November of 2005, I was
5 requested, uh -- my assistance was requested by the
6 Calumet County Sheriff's Office, uh, to examine some
7 human remains that had been recovered.

8 Q And, uh, in terms of today, um, why are you here
9 today?

10 A I am here to explain the work I've done, and my
11 findings, um, with particular reference to a
12 determination of, um, the sex and the age of the
13 burned human remains I was asked to examine, uh, as
14 well as to render a professional opinion with respect
15 to the manner of death.

16 Q Now, before we get to your findings and opinions,
17 Doctor, um, I'd like to find a little bit about
18 yourself, please. Um, first of all, uh, tell us
19 your educational background?

20 A I received a Master's Degree in anthropology in 1981,
21 a Doctorate, or Ph.D, in anthropology in 1986, uh,
22 and in 1997 was awarded what's called "diplomat"
23 status or board certification in forensic
24 anthropology.

25 Q And if you could tell us, what does diplomat

1 status, or bird cer -- board certification status
2 what -- why is that significant?

3 A It's significant, uh, to a forensic anthropologist
4 because it means that you have gone through a very
5 rigorous process in submitting case reports for
6 review to an organization called the American Board
7 of Forensic Anthropology, who will review your
8 application and determine your fitness to sit for a
9 very rigorous day-long written and practical
10 examination.

11 Q From which institutions did you receive your
12 Masters and Doctoral Degrees?

13 A Both degrees were received from New York University
14 in New York City.

15 Q Tell us, if you would, um, your, uh -- Well, how
16 long have you been with the Wisconsin Historical
17 Society? We'll start there.

18 A I, uh, moved to Wisconsin in, uh -- at the end of May
19 of -- of 1993 to accept the position with the
20 Wisconsin Historical Society. So I've been here
21 almost 14 years.

22 Q Did you say '83? '93?

23 A '93.

24 Q What, um, positions have you held which, uh,
25 benefit you in the performance of your

1 anthropological, uh, duties and opinions that you
2 render?

3 A Well, there have been a number. Uh, for me, one of
4 the most important positions I held before coming to
5 Wisconsin, uh, began in 1986, and that was as a
6 consulting forensic anthropologist, one of two for
7 the Office of Chief Medical Examiner in New York
8 City.

9 Uh, I have also, uh, been fortunate and
10 honored to be asked to be part of a federal
11 disaster mortuary team that goes by the name --
12 the full name is, um, Disaster Mortuary
13 Operational Response Team. And that's a team
14 made up of different kind of professionals,
15 including dentists and pathologists and, uh,
16 other specialties like forensic anthropology,
17 that are most useful in identifying, um, remains
18 that have sustained effects from disasters,
19 whether they be, um, an explosion, a burning
20 episode, um, more -- most recently Hurricane
21 Katrina, uh, the World Trade Center, plane
22 crashes, things like that.

23 Q And this, uh, Disaster Mortuary Operational
24 Response Team, is that known by the acronym
25 DMORT?

1 A It is.

2 Q D-M-O-R-T?

3 A That's correct.

4 Q And, now, you mentioned some disaster relief
5 efforts. Have you participated in any disaster
6 relief efforts, uh, involving the need for, uh,
7 expertise in the field of forensic anthropology?

8 A Yes, I have.

9 Q Uh, tell us about those responses that you've
10 been involved in?

11 A Well, of the requests made to me to assist, um, I --
12 I have been asked to assist on multiple occasions.
13 Of those requests I've been able to, uh, actually
14 help with three of them. The first one was regarding
15 a train derailment, train crash, in Bourbonnais,
16 Illinois, uh, where, uh, a number of individuals on
17 that train, um, sustained, um, trauma from -- from
18 the crash and also from the subsequent burning
19 episode.

20 I also was called, uh, the day of the
21 World Trade Center disaster, excuse me, to
22 respond to New York to help with the
23 identification of the extremely fragmented and,
24 in many cases, very badly burned human remains
25 from that attack.

1 Uh, and more recently, in September of
2 2005 to -- I was asked to go down to
3 Mississippi -- to, Gulf Port, Mississippi to
4 assist with the identification of, uh, in some
5 cases, cemetery remains that had been washed out,
6 and in other cases, to assist, uh, with remains
7 of unidentified individuals, um, who were either
8 washed up or recovered subsequent to, uh,
9 Hurricane Katrina and Rita, which followed on its
10 heels.

11 Q Are you, uh -- Do you -- Are you a member of any
12 committees or belong to any boards of, uh -- that
13 are particular interest with respect to the field
14 of forensic anthropology?

15 A Yes, I am, um, a board member of the American Board
16 of Forensic Anthropology. Uh, for six years, uh, I
17 served on that board as an elected member. Uh, the
18 last three years of that six-year term as the board
19 secretary.

20 Q Currently, do you belong to any, um, uh, national
21 professional organizations?

22 A Yes, I do.

23 Q And what, uh, are those organizations?

24 A Um, may I refer to my resumé so that I don't leave
25 anything out that may be of interest?

1 (Exhibit 381 marked for identification.)

2 Q Sure. Showing you what has been marked for
3 identification purposes has Exhibit 3-8-1. Could
4 you identify that for us, please?

5 A Exhibit 381 is my resumé, also known as a Curriculum
6 Vitae, um, which consists of 17 plus pages. Um, with
7 regard to my professional affiliations, um, I do
8 belong to a number of national and regional
9 organizations.

10 Um, I am a, um -- a fellow of the
11 American Academy of Forensic Sciences, which is
12 basically the umbrella organization of forensic
13 professionals in this country, in Canada and
14 membership also, uh, spans the globe. Uh, being
15 a fellow of that organization means that you have
16 attained the highest level of membership, uh,
17 that the American Academy of Forensic Sciences,
18 um, has.

19 Uh, as I mentioned, I am also a board
20 certified forensic anthropologist with an
21 affiliation with the American Board of Forensic
22 Anthropology.

23 I am also a member of the International
24 Association for Identification, which most
25 recently has begun a forensic anthropology

1 section, and I am, uh, acting, uh, with other
2 colleagues to begin, uh, that section for the
3 organization.

4 Q All right. Um, if I may interrupt you. And,
5 again, continuing the field of anthropology, um,
6 are you a member of any, uh, regional
7 professional organizations?

8 A Yes, I am, sir.

9 Q What would those be?

10 A Um, with respect to my qualifications here, the -- I
11 am a member of the Wisconsin Association for
12 Identification, the Wisconsin Association of Homicide
13 Investigators, and the Wisconsin Coroners and Medical
14 Examiners Association.

15 Q Have you received, uh, any, um, particular
16 research grants, awards, or honors of, um,
17 particular importance with respect to your field
18 of forensic anthropology?

19 A Uh, yes, I have. If I may refer, again to --

20 Q Sure.

21 A -- Exhibit 381?

22 Q You may.

23 ATTORNEY STRANG: Your Honor, that
24 exhibit can be admitted without --

25 ATTORNEY FALLON: I --

1 ATTORNEY STRANG: -- objection.

2 ATTORNEY FALLON: Thank you. I was just
3 about to do that in a moment or two.

4 THE COURT: All right. The exhibit is
5 admitted.

6 ATTORNEY FALLON: Thank you.

7 A Most recent for 2006, I am, uh, proud to say that my
8 peers, uh, in the DMORT organization in, uh, the, uh,
9 federal disaster team have named me the distinguished
10 member of the year.

11 Um, and among other, uh, awards and
12 honors, in the year 2000, the Wisconsin State
13 Assembly, uh, presented me with a citation, uh,
14 recognizing my work in another forensic case, uh,
15 from Sauk County, Wisconsin.

16 Q All right. So is the, uh, Curriculum Vitae, uh,
17 that you have there a -- a summary of your
18 professional training and experience awards,
19 publications, etc.?

20 A It is, sir.

21 Q Thank you. Uh, turning now to this particular
22 case, when did you first become involved, uh, in
23 this case, involving, uh, Teresa Halbach?

24 A My involvement with this case began with a telephone
25 call. Actually a voicemail message that was left for

1 me on November 9 of 2005. Uh, there was a call
2 placed to me, uh, by special agent of the Wisconsin
3 Department of Justice, uh, Division of Criminal
4 Investigation, uh, asking for my assistance in
5 examining some, um, items that had been collected,
6 uh, with -- and the specific request had to do with
7 looking at those items to determine if any human
8 remains were part of that in -- uh, ini -- initial
9 collection of items.

10 Q I'd like to direct your attention to, uh, the
11 time frame of November 5, which we've established
12 is a Saturday, through November 10th, which we
13 have also established as a Thursday. Uh, during
14 that time frame, uh, were you in the state of
15 Wisconsin?

16 A I, uh, left, uh, on that Sunday, which I believe
17 would have been the --

18 Q Sixth?

19 A -- 6th of, uh, November, returning on Wednesday, the
20 9th. I was, along with four or five other
21 individuals, who's representing the state of
22 Wisconsin at a -- at a missing persons conference in
23 Denver, Colorado.

24 Q All right. You returned to the 9th and your
25 first day back at work would have been the 10th?

1 A Would have been Thursday, November 10 of '05.

2 Q What were you asked to do, initially? What were
3 your primary tasks?

4 A My primary task was to examine the contents of a
5 sealed box, um, and to provide information about the
6 con -- the contents of that box.

7 Um, when I opened the box, uh, on,
8 Thursday, November 10 at the Dane County
9 Coroner's Office Morgue where I do most of my,
10 uh, laboratory work, um, I opened the box to find
11 many, uh, blackened, highly fragmented and
12 incomplete human bone fragments.

13 Q All right. Upon making that examination and
14 after receiving the request from law enforcement,
15 what did you attempt, or what was your -- what
16 were you attempting to do with respect to, uh,
17 evaluating these, uh, fragments?

18 A Well, the first task at hand in this case, and in --
19 in other cases, uh, as well, sometimes, uh, one of
20 the tasks that a forensic anthropologist is often
21 asked to do, is to look at, um, remains, whether
22 they're fragmentary or complete, and render an
23 opinion as to whether or not the remains are human
24 and, if you can answer yes to that question, to then,
25 uh, distinguish or determine, um, can you also

1 distinguish other kinds of items that are associated
2 with those.

3 So one of the -- one of the key roles
4 for forensic anthropologists is to determine or
5 distinguish human from nonhuman remains, whether
6 they're biological or otherwise.

7 Q I've -- I've just been informed you might have to
8 pull that microphone just a little bit closer.

9 A Okay. I'll try and do better. Thank you.

10 Q At some point were you attempting to develop a
11 biological profile of, uh -- of the person, if
12 there was, in fact, a determination that they
13 were human remains?

14 A Yes. One of the other key roles of a forensic
15 anthropologist is to develop what's called a
16 biological profile. And that often includes, and
17 should include, a determination of the sex of the
18 individual, the age of the individual, um, the
19 stature or height of the individual, the ancestry or
20 race of the individual, um, a determination as to
21 whether or not, um, there are any, uh -- the remains
22 have sustained trauma of any kind, whether they
23 occurred before death or after death, and, also, um,
24 to re-fit any fragments that might be re-approximated
25 or put back together.

1 Q Are you familiar with the terms "antemortem",
2 "postmortem" and "perimortem"?

3 A Yes, I am.

4 Q Could you explain those terms to us --

5 A I --

6 Q -- please, at least as you apply them in your
7 field of anthropology?

8 A I would be happy to. The term "antemortem", the
9 prefix "ante" means "before", "mortem" means "death",
10 so antemortem means before death.

11 Perimortem, P-e-r-i-m-o-r-t-e-m, "peri"
12 means at or near the time of death. So that's
13 what perimortem means.

14 And postmortem, "post" means "after" so
15 postmortem means after death.

16 Q All right. In terms of your task, could you tell
17 us, please, what were -- what were the condition
18 of the bones and fragments and materials that
19 were sent to you?

20 A The material that I initially examined, and virtually
21 all of the subsequent material presented to me for
22 examination, um, the human bone fragments that I
23 identified and sorted and inventoried was incomplete,
24 highly fragmented, burned, and in some cases what we
25 call calcined, and calcined is -- is a state or a

1 condition, um, along a continuum or a progression of
2 what happens to bone, human bone, when it's exposed
3 to heat.

4 Um, and it's -- it's -- so if you can
5 break that down into three different kind of
6 general periods, when bone is initially exposed
7 to heat, it begins to lose moisture. Um, many
8 people think of bones as, uh -- as inert, kind of
9 as a -- like a piece of wood, but, in fact, there
10 are blood vessels that run through bone, and bone
11 is a very dynamic substance. As anyone who may
12 have broken a bone knows, it -- it hurts a lot
13 when that happens.

14 So when bone is exposed to heat, it
15 first begins to lose its moisture. It will then
16 begin, um, as time goes on, as more heat or, um,
17 is -- is applied or the duration of the exposure
18 to heat is extended, the organic content of the
19 bone, um, what makes you and me human, begins
20 to -- to disappear from the bone.

21 And then the third phase, when a bone is
22 calcined as I mentioned, is when it begins to
23 lose all of its minerals, um, that keep the bones
24 strong. And so when that happens, the bone
25 begins to function not so much as a living bone,

1 but more as a brittle material.

2 Q All right. Now, in the field of, um, disaster
3 relief and forensic anthropology, are there,
4 uh -- is there a standard, or are there levels of
5 destruction or degradation that are, uh, assigned
6 to particular samples when you're asked to
7 examine them?

8 A Well, again, um, different -- different researchers
9 have -- have written about this and have assigned,
10 um, or developed these, um, protocols or continuums
11 where, um, the initial level is that, uh, a body may
12 have been exposed to heat, continuing up to the final
13 level where you are left with cremated remains. And
14 it's, um -- the phases that have been defined by
15 researchers are -- are fairly discreet or stand alone
16 phases, but we know that -- that there's a continuum.
17 There's a -- there's a continual progression from
18 recognizably burned individual, to an individual
19 whose remains have been, for all intents and
20 purposes, cremated.

21 Q All right. Uh, I'd like to show you some
22 exhibits, and to begin with, uh, some, uh,
23 preliminary questions.

24 THE COURT: Doctor, I think I'm going to
25 ask you to move the microphone just a little further

1 away. There's a little distortion coming through
2 the --

3 THE WITNESS: My apologies.

4 THE COURT: That's okay.

5 Q (By Attorney Fallon) If you would be so kind to
6 uh -- to begin with the, uh -- the first
7 photograph. I believe it's marked as Exhibit,
8 uh, 382?

9 A That's correct.

10 Q All right. And, uh --

11 A Exhibit 382 is a -- what appears to be a four-by-six
12 inch color photograph of myself and other
13 investigators sorting through what appears to be burn
14 material. And, uh, if memory serves, uh, I believe
15 this photo was taken at the Wisconsin Crime
16 Laboratory in Madison in December of -- of 2005.

17 Q All right. Um, and the next, uh, photograph?

18 A The next four-by-six color photograph, marked Exhibit
19 383, depicts the, uh, contents of the initial box
20 that was submitted to me, uh, for examination, uh,
21 under Calumet County Sheriff's Office Tag 8318.

22 This was a box that was left for me, um,
23 at my office on November 9 of 2005. That on the
24 following day, I brought it to the Dane County
25 Coroner's Office Morgue, uh, to examine.

1 Q All right.

2 A And -- and I would also note, um, the darkened color

3 of -- of the bones, um, and the fact that some of the

4 lighter colored bones, the bones that almost look

5 white, have taken on or have reached that phase, that

6 calcine phase, where the mineral content and the

7 moisture of the bone, uh, has already dissipated or

8 is gone.

9 Q All right. If you could take -- I believe

10 there's -- should be a, um, laser pointer --

11 A Yes.

12 Q -- up there? If you could just point to the box

13 and just give the jury an example, if you would,

14 of some of these calcined bones that you just

15 described for them? If you could pick out from

16 the box there?

17 A Um, there's one.

18 Q All right.

19 A Um --

20 Q Toward the bottom of the --

21 A There's another.

22 Q Toward the bottom of the box on the edge there?

23 A Correct.

24 Q All right.

25 A And a fragment here, a fragment there. And I would

1 also note that some of these fragments, um, as you
2 probably can see, uh, in some cases have a calcine
3 portion and maybe a charred portion all part of the
4 same bone.

5 Q All right. What is the, uh, next, uh,
6 photograph? This is Exhibit --

7 A This is Exhibit 384.

8 Q All right. And what are we looking at here?

9 A You are looking at, um, uh, a sampling of skull
10 fragments, uh, of different sizes, um, that were part
11 of that initial submission that came in that white
12 box to me that I initially examined on November 10 of
13 2005.

14 Um, they look, I'm sure, very irregular
15 to all of you, um, but I would call your
16 attention to some, uh, characteristic, um, traits
17 that I -- that stand out to me immediately. Um,
18 these -- these areas of projections, um, these
19 are all part of cranial sutures, where many of
20 the bones of the skull fit together.

21 Q All right. If we were to zoom in, would that
22 assist you in further illustrating the point
23 you're making?

24 A Thank you, yes. Here and here.

25 Q So you're pointing to pieces what -- what appear

1 to be very irregular shaped?

2 A That's correct.

3 Q All right. And those are cranial sutures?

4 A They, um -- they represent parts of cranial sutures
5 and there are different cranial sutures around the
6 skull.

7 Q All right. Now, do you recall approximately, um,
8 how many, um, diagnostic, uh, human skull
9 fragments you did examine or look at?

10 A If memory serves, there were 58 diagnostic skull
11 fragments. Um, and when I use the word "diagnostic",
12 uh, to me that means there was en -- there was enough
13 about the bone, either given its shape or its
14 contours, where I could say, yes, this bone fragment
15 came from the skull.

16 Q And, uh, it -- I may not be clear enough in my
17 own head, so what, exactly, is a cranial suture?

18 A We, um -- All of us, hopefully, as -- as, uh -- as
19 we're born, develop into kids and -- and get older.
20 Um, hopefully our heads grow to accommodate our
21 growing brains. And, uh, essentially, what happens
22 is that -- the skull is made up of multiple bones,
23 and as your brain grows, um, your skull is able to
24 accommodate that growth at these open sutures or
25 these, um -- I don't want to call them a zipper, but

1 in a sense, you could think of them as the teeth of a
2 zipper, um, that as you get older, um, those teeth or
3 these sutures sometimes fuse or grow together. But
4 in -- in younger children, even, uh, in adults,
5 hopefully my age, those sutures are still pretty open
6 even though my -- my brain has stopped growing.

7 Um, for little kids or for babies, um,
8 you can sometimes feel a soft spot on the top of
9 the head. That's because the bone, uh, has not
10 grown to the point where, um, that soft spot is
11 covered up yet.

12 Q All right. Are they somewhat reflected, or some
13 people refer to those as growth plates? Or they
14 assist in the growth of the head and this -- the
15 brain? Skull?

16 A Most people, uh, refer to growth plates with respect
17 to growing long bones. The leg bones and the arm
18 bones. But less so, really, with the skull.

19 Q All right. All right. Uh, next, uh, exhibit,
20 please? This is Exhibit No. three eighty --

21 A This is Exhibit 385. Um, this photograph was taken,
22 um, as part of my preparations in preparing, um, a
23 submission or a package for a transfer to the FBI
24 for -- for examination. What you are looking at in
25 this image, um, is a bone fragment that's -- that's

1 kind of charred but, um, perhaps not really burned,
2 and certainly not to the degree of the other, uh --
3 of all of the other bone fragments found in this
4 case.

5 ATTORNEY FALLON: I'm going to ask my
6 colleague, if I could, to zoom in on the one that
7 you seem to be pointing at. Pointing your laser
8 pointer at.

9 A Thank you. This -- this is the bone, um, and
10 although there's no scale in this particular
11 photograph, it was really meant as a -- as a, um -- a
12 reminder to me what the contents of that evidence tag
13 number, uh, contained.

14 And this is -- was the largest bone that
15 was collected as part of this evidence tag. It
16 is, uh, unquestionably human, um, and -- and
17 the -- the color of this bone is more typical of
18 what you would expect to see, um, in a nonburn
19 case. In other words, it was somehow protected,
20 um, and if you could zoom out to the larger photo
21 for me, please, was protected by some of, um,
22 this dried or desiccated muscle tissue that
23 surrounded this bone.

24 Q All right. Now, the one we've been examining
25 more closely here, is that the bone that you, uh,

1 had sent or arranged to be sent to the FBI, or
2 excuse me, to the Crime Lab for further analysis?

3 A No, this -- um, the contents of all of the items you
4 see on this screen, um, this larger bone, which is
5 only about two-and-a-half inches long, and some of
6 these other bone fragments, and this muscle tissue,
7 uh, was packaged by me and transferred directly to
8 the FBI in November of 2005.

9 Q All right. Um, what type of bone, uh -- Is that
10 all bone, or is it tissue, or what, exactly, is
11 that one to the far left there?

12 A This?

13 Q Yes.

14 A This entire fragment is human bone.

15 Q All right. All right. Based on your examination
16 of the bones and fragments recovered, uh, from
17 the, um, burn pit behind the garage of Mr. Steven
18 Avery, did you find evidence of human remains?

19 A Yes, sir, I did.

20 Q And what did you determine?

21 A I was able to determine --

22 Q Were they human or nonhuman? Human?

23 A They were human.

24 Q Were you able to determine, uh, the -- or
25 identify the relative age of the person whose

1 remains you examined?

2 A Yes, I was. And it -- it's, uh, with a reasonable,
3 uh, degree of scientific certainty, based on an
4 examination of certain preserved parts of the
5 skeleton, um, my assessment is that the, uh,
6 fragmentary and burned remains that I was asked to
7 examine from behind Mr. Steven Avery's garage were
8 those, um, of someone, uh, probably no older than
9 between 30 to 35 years of age.

10 Q When you -- when you say "no older" can you
11 explain that? No older than the range of 30 to
12 35. Can you explain how anthropologists use
13 dates like that so that we're not confused?

14 A I -- I will. And, um, I -- I would say that any
15 reasonable and professional forensic anthropologist
16 will always provide an -- an age range, as opposed to
17 a particular year, um, because we can never really
18 know for sure. But there are certain
19 characteristics, certain things we expect to see
20 happening to bone at certain ages, and as we -- as we
21 age, as we start to look a little different every
22 year on the outside, on the inside our bones also
23 start to look a little different.

24 And what I'm referring to in particular
25 is the onset of a degenerative bone condition

1 known as arthritis.

2 Q All right. So when you say, uh, 30 -- of an
3 individual less than 30 to 35, in other words,
4 it's someone who's younger than -- I assume you
5 have different levels? There's a 30 to 35,
6 there's a 20 to 25, or a 40 to 50, so they --
7 these remains of this person was somebody who was
8 clearly less than 30 to 35 years of age?

9 A That's correct. And I say that because there were no
10 bony signs of arthritis on several of the joint
11 surfaces that I was able to recognize and examine.

12 Q Were you able to determine the sex of the person
13 whose remains were recovered?

14 A Yes, I was.

15 Q And what was that?

16 A That in my professional opinion these remains are
17 those of an adult female.

18 Q And why were you able to make that determination?

19 A I was able to make that determin -- determination
20 based on, um, certain characteristics, traits and
21 measurements of various portions of the body that had
22 been recovered and could be recognized as to where in
23 the body they come from. Actually, which bone they
24 came from.

25 Q All right. I would like to direct your attention

1 to, I believe, the next photograph? And that
2 would be Exhibit 386?

3 A Three-eight-six. That's correct.

4 Q And, uh, it's now being displayed on the screen.
5 What are we looking at in Exhibit 386?

6 A Um, I -- I would ask, um, you to -- as you're facing
7 me, um, we are facing this image, and -- and what we
8 are looking at is, um, the recognizable, what I call
9 diagnostic, portions of human facial bones, and --
10 and I'd like to take you through what it is I see in
11 the hopes that you can orient yourselves as well.

12 Q Sure.

13 A Um, if you, um -- if you're looking at this head-on
14 or face-on, if you will, this would be the top of the
15 left eye socket. This would be the top of the right
16 eye socket. This is the left nasal bone. Um,
17 everyone's nose has a right side and a left side. We
18 recovered the left nasal bone. We also have the
19 entire, or virtually the entire, right cheekbone, as
20 well as a portion of the left cheekbone, and a
21 portion of bone that begins in the cheekbone area and
22 continues over and above the left op -- the opening
23 for the left ear.

24 Q All right.

25 A And -- and I must say, if I can add, that, um, in

1 burn situations like this one, it is sometimes
2 unusual to find the -- the facial structures because
3 they are thin and easily damaged. And the fact that
4 we have these bones and they are as recognizable as
5 they are, to me is -- is, in part, a testament to the
6 recovery that occurred at the scene.

7 Q I note from examining, uh, Exhibit 386 that there
8 appear to be some red dots on the fragments which
9 are displayed?

10 A That's correct.

11 Q Can you explain what those dots are and who --
12 how they came to be?

13 A Yes. Um, I would be happy to do that. As -- as part
14 of the investigation and the sorting, um, I needed to
15 find a way to, um -- to mark from what location
16 certain bones came. And what I initially decided to
17 do was to go out to Walgreens, buy some very brightly
18 colored nail polish in different colors, different
19 enough so that each color could be distinguished from
20 one another, and mark certain recovered items whose
21 tag numbers or identification numbers we knew so that
22 if I was, over time, be able -- was able to re-fit
23 fragments, I would know if one match and another
24 match came from the same, uh, evidence collection or
25 came from two different evidence collections, for

1 example.

2 Um, the red dots you see here, um,
3 indicate that all of these fragments, all of
4 these, recognizable to a forensic anthropologist,
5 facial fragments, came from that initial recovery
6 Tag No. 8318, uh, in that white box that I was
7 initially asked to examine.

8 Um, I would also like to say that I took
9 great pains on these fragments, and other
10 fragments that may have been so marked, to place
11 these dots in areas that did not ob -- obscure
12 any kind of anatomical landmark or that might be
13 needed later on for examination purposes.

14 Q All right. If you would turn to the next
15 photograph? This would be Exhibit 387?

16 A Yes, sir.

17 Q And 387 is what?

18 A Three eighty-seven is a close-up of a portion, uh, of
19 facial bones that we saw in the previous, uh, slide.
20 Uh, what you are looking at, uh, we're doing the same
21 thing. We're looking face-on at somebody, and what
22 you are looking at, this area is actually the area
23 just above and between your eyes. And, again, this
24 area is the portion of the frontal bone or the
25 forehead that demarcates or forms the boundary for

1 the top of the left eye socket.

2 You are also looking at -- at the left
3 nasal bone. Uh, and while you can't see it here,
4 um, actually -- which actually fit with this
5 frontal bone.

6 Q All right. If you would, uh, turn to the next,
7 uh, photograph, I believe it would be Exhibit
8 388?

9 A Yes, sir.

10 Q And Exhibit 388 is, um -- First of all, you have
11 to tell us a little bit about this exhibit. Um,
12 um, how was this -- with whom did you work to
13 prepare this particular exhibit?

14 A Um, I had the opportunity, uh, to work with, uh, a
15 Wisconsin State Trooper by the name of Timothy
16 Austin, who prepared many of the graphics for this
17 case, um, using software that, uh, I wouldn't have
18 the first idea about how to make work, but he -- he
19 did, uh, a wonderful job in -- in helping me depict
20 certain areas of -- of the body that had been
21 recovered, uh, from -- from Mr. Avery's property.

22 Um, what this slide depicts is a graphic
23 of a human skull. We are essentially looking,
24 again, face-on at that skull, and each of these
25 identifying labels, uh, points to the portion of

1 the facial bone that was depicted and was
2 recognized and was inventoried, uh, in this
3 particular case.

4 If you remember, we had virtually the
5 entire right cheekbone, um, that we call the
6 malar bone, but it's essentially a cheekbone, um,
7 we had the left nasal bone, um, we had this
8 portion of the left cheekbone, the left malar
9 again. We had that, um, linear or stick-looking
10 piece of bone that forms part of the cheekbone
11 that continues over and above the -- the opening
12 for the left ear.

13 Um, and a very, very characteristic
14 portion of the left frontal bone that contains,
15 uh, a continuous surface demarcating the top of
16 the left eye socket.

17 We also had, uh, fragments from the --
18 the top of the right eye sockets, but,
19 unfortunate -- unfortunately, given their
20 fragmentary nature, they could not be
21 re-approximated or fit one right next to another.

22 Q All right. If we could have you turn to one
23 more, uh, photograph, and then, um, I'll ask a
24 couple of questions regarding the ones we just
25 looked at. Uh, Exhibit, I believe it would be

1 389?

2 A Yes, sir.

3 Q All right. Um, the question at hand, as we began
4 the analysis of these, uh, facial bones, was your
5 ability to determine a female from male, and, um,
6 if you would then, uh, illustrate further, uh,
7 making a compare and contrast, uh, Exhibit, uh,
8 389, with, uh, the male and female anatomy and
9 tell us how you were able to determine that the
10 remains you examined were, in fact, female?

11 A In fact, there were multiple indicators of -- of, uh,
12 these remains having come from a female. Um, the
13 first, um -- the first evidence of that actually came
14 from that left frontal bone fragment that you saw a
15 minute ago with, um, the sharp, um, upper boundary of
16 the left eye socket, and that is, uh, characteristic,
17 and actually the hallmark, uh, for, um, being able to
18 dis -- distinguish -- well, one of the
19 characteristics and one of the hallmarks for allowing
20 anthropologists to make a distinction between males
21 and females.

22 Q So I take it, then, by your description, you're
23 pointing that the skeletal figure depicted on the
24 left-hand of our screen is a male?

25 A No, actually, uh, facing the screen --

1 Q Oh. Our -- our looking -- look -- right-hand
2 side, excuse me.

3 A Yes. The skeleton graphic on the right-hand side is
4 the male --

5 Q Right.

6 A -- and on the left-hand side depicts, in a general
7 way, a female.

8 Q Okay. Now, you said, uh, in addition to the, uh,
9 facial bone, uh, that you've just described,
10 there were other, uh, bone, uh, material that you
11 examined that, um, further supported your opinion
12 that, uh, the remains were of a female?

13 A Yes, sir.

14 Q Tell us --

15 A Um --

16 Q -- about that.

17 A As we move from, um, the head down the body to what
18 are called the post-cranials, anything neck and
19 below, post, again, after, so below the -- below the
20 skull, uh, one of the, um, fragments that was
21 actually recovered and in very, very good shape was
22 part -- was a bone that forms part of the elbow
23 joint, and the elbow joint is made up of three bones;
24 the lower end of the upper arm bone, that's called
25 the humerus, and the upper end of the two lower arm

1 bones, the one on the thumb side of the arm, called
2 the radius, and the one on the other side, called the
3 ulna.

4 And what I was able to identify was the
5 elbow, and of the radius, it's called the radial
6 head, which is, um, a rounded lozenge-shaped
7 portion of the bone that forms part of the elbow
8 joint.

9 Q All right. And, um, did you recover, uh, any
10 other bones? For instance, a femur shaft or
11 anything like that which would be of -- would be
12 of some assistance in determining the sex?

13 A Yes. Along with the head of the radius, um, that
14 actually I can try and point out in this graphic,
15 it's -- well, maybe not. Um, may I -- may I approach
16 the --

17 Q Sure. I think that --

18 A -- graphic? I think I might be able to do a little
19 better.

20 Q Sure. Would you like to use a pen to, uh, point
21 or --

22 A Well, no, this -- this should work. Um, it's that
23 lozenge-shaped area right there. You have one on
24 the left and one on the right, um, but I was only
25 able to identify one of those radial heads and -- and

1 I do not know from what side that came.

2 Um, along with the head of the radius
3 there was also a femur shaft. The femur is the
4 thigh bone. And, um, most long bones, the arm
5 bones and the leg bones, as you can see in this
6 photograph, the upper arm bones, there's an upper
7 end at the joint, a lower end at the joint, and
8 in between those two joint ends is usually the
9 cylindrical or rounded part of the bone that's
10 called the shaft.

11 And there was a femur shaft fragment
12 that was found in with the initial recovery Tag
13 No. 8318 whose circumference measurement or the
14 measurement around the tubular part of the bone
15 falls well within the expected range, uh, for
16 females.

17 Q Now, early on in -- when we were talking about
18 your experiences, you say -- uh, you said that
19 oftentimes the ancestry or stature of a person
20 could be determined. Were you able to make any
21 of those determinations upon your examination in
22 this case?

23 A I was not. Uh, stature is, um -- was not possible.
24 There were no complete long bones or no bones long
25 enough to even, um, estimate stature from. Uh,

1 likewise, there was nothing indicative of, um,
2 ancestry.

3 There's certain parts of the body that
4 anthropologists typically look at, um, skull
5 shapes and proportions, as well as areas of the
6 femur and some other bones that often assist us
7 in determining ancestry or race. And, in fact,
8 unless you can make a determination as to
9 ancestry, um, no good forensic anthropologist
10 would even attempt stature because many of the
11 equations we use to plug in the length of a long
12 bone require that you know the ancestry
13 beforehand.

14 Q I take it that's because there are different
15 standards associated with age?

16 A There are different standards because different
17 populations, um, are proportioned differently, and
18 those equations take that into account.

19 Q Doctor, I want to switch gears a little bit from
20 some of your, uh, findings here, and, uh, ask you
21 this, um, uh, question: As a forensic
22 anthropologist, are you -- um, are you familiar
23 with the concepts of cause and manner of death?

24 A Yes, I am.

25 Q Are you, um, sometimes asked to render such

1 opinions based on your training, your experience
2 and your findings?

3 A Uh, I am. Uh, and in particular, in cases where
4 remains are too -- either too badly decomposed or
5 have been otherwise compromised to the point where
6 traditional autopsy cannot be performed.

7 Q So, uh, for the benefit, uh, of all of us here,
8 in your mind, please distinguish cause of death
9 and manner of death.

10 A When -- when, uh, someone uses the terms "cause of
11 death" it's, um, why -- why did the person die? Um,
12 but "manner of death", um, is -- is how did they die?
13 And, um, most people would agree that there -- in
14 general, there are, um, four main categories that
15 people look to when they talk about manner of death.
16 And, um, one of those categories is, uh, a natural
17 death. Another category is an accidental death. A
18 third category would be, uh, suicidal. Someone takes
19 their own life. And the fourth major recognized
20 category is homicide. That is, someone takes the
21 life of someone else.

22 Q Um, based on your findings and examination of the
23 materials submitted to you in your training, do
24 you have an opinion as to the manner of death of
25 this individual?

1 A I do, sir.

2 Q And what is that opinion?

3 A In, um, my professional opinion, the manner of death,
4 uh, in this case was by homicidal violence.

5 Q Could you explain that term for us, please?

6 A Yes, sir. Um, in -- in inventorying and examining
7 every fragment, um, every piece that was recovered
8 from this scene, and in separating the human bone
9 from the nonhuman bone, from the nonbone, whether it
10 was metal, fiber, whatever, um, there were two
11 fragments in particular, two skull fragments, that
12 showed, in my mind, unmistakable, um, defects or
13 unnatural openings, openings that were not caused
14 either by some disease process, they weren't
15 pathological nor were they caused by any congenital
16 condition or some kind of condition that someone
17 might have been born with.

18 Q Now, if you would turn to the next, uh, exhibit
19 you have there? And that is Exhibit 3 --

20 A That is Exhibit 3-9-0.

21 Q What are we looking at?

22 A We are looking at one of the cranial fragments. Um,
23 obviously, it's unrecognizable to most people who --
24 who haven't spent many years looking at -- at bone
25 fragments, but this is a human bone fragment that has

1 been burned, that is fragmented. You are looking,
2 uh -- If you think of the skull kind of as a ball
3 that has an inside surface and an outside surface,
4 you are looking at the inside surface of a skull bone
5 that I know comes from the side of the skull, and I
6 know that because of these anatomical landmarks here.

7 These, um, what looks like -- look like
8 tracks in the sand are actually impressions in
9 the bone in which, um, vessels sit. Um, and when
10 you hear that someone has meningitis, these --
11 these, uh, tracks are the -- the, uh, areas in
12 which the meningeal -- middle meningeal vessels
13 sit. The vessels that become inflamed when
14 someone does have meningitis.

15 So the fact that we see these vessel
16 markings mean that this bone has come from one of
17 the two bones on the side of the skull, and these
18 bones, they're matched bones. They're called
19 parietal bones, p-a-r-i-t-a-l. There's a left
20 parietal bone and a right pariet -- parietal
21 bone, and when I take this bone, um, and orient
22 it in its, um, correct anatomical position,
23 because of the placement and direction of these
24 vessel markings, I know that this fragment came
25 from the left side of the skull from the left

1 parietal.

2 I -- I also --

3 Q I was going to say, uh, parietal is p-a-r-i-e --

4 A E-t-a-l.

5 Q Okay. And, uh, just so that we're oriented in
6 common everyday parlance, uh, where -- where on
7 the skull is the parietal bone found?

8 A The -- We -- As I mentioned, we have two parietal
9 bones. One, it's a -- it's a matched set. We have
10 one on the left side of our skull and one on the
11 right side.

12 Q All right. Um, in relation to an area that, um,
13 people are familiar with, sometimes called the
14 temporal area, where in relation to the temporal
15 area would this parietal bone, uh, which, uh,
16 appears to be depicted in Exhibit 390, where
17 would that be on the left side?

18 A The temporal -- Uh, the temple area, um, would be,
19 uh, to the front portion of that bone.

20 Q Okay. Um, before I go further into, uh, having
21 you describe the findings regarding these, um,
22 unnatural defects to the skull fragments, were
23 there any other reasons, um, that you believed
24 supported, uh, any other finding that you made
25 that supported your opinion that this was

1 homicidal violence?

2 A Well, I think, um, there was a -- a clear effort to
3 obscure a body, uh, through burning. Um, the -- the
4 extreme heat-related fragmentation, um, the burning
5 of the bone, in some cases the calcine bone, taking
6 the -- the destruction of the bone mineral to -- to
7 its extent, um, there was an obvious attempt, in my
8 professional opinion, to obscure the identity of an
9 individual.

10 Q All right. All right. Returning, then again, to
11 these, um, uh, defects, you've talked a little
12 bit about the parietal defect depicted in Exhibit
13 390, if I could direct your attention to Exhibit
14 391, if you could tell us what that is?

15 THE COURT: Mr. Fallon, before you begin,
16 I -- or continue, I'm going to give people a chance
17 to get up and stretch. It's been about an hour
18 since we've been out here, so... We're not going to
19 take a break, just a chance to get up and stretch.

20 (Short break taken.)

21 All right. You may be seated.

22 Mr. Fallon, you may continue.

23 Q (By Attorney Fallon) Directing your attention --
24 I think we were at Exhibit 391. What is Exhibit
25 391?

1 A Three-ninety-one, um, represents an image of three
2 different bones that were re-approximated or
3 re-fitted from the left parietal.

4 Um, this larger fragment, now in proper
5 anatomical position, um, is the fragment -- the
6 only fragment we saw in the previous image.

7 You are looking, uh, at the fragment as
8 if you were standing inside of the skull looking
9 to the inside of the left side of the skull.

10 And so, again, I would call your
11 attention to these vessel markings that now are
12 in proper anatomical position. Um, the outside
13 of the skull would be behind.

14 Q All right. Now, you mentioned something about
15 these, uh, defects. Is the def -- one of the
16 defects the, uh -- that you found with --
17 associated with the parietal skull bone, is it
18 featured in this exhibit here?

19 A Yes, sir, it is.

20 Q Would you point out to us, um, the, um -- the
21 defect that, uh, caused you some concern and
22 support your opinion with respect to homicidal
23 violence as the manner of death?

24 A Yes, sir. I would, uh, like to call your attention
25 to the top portion of this bone, and in particular to

1 this semi-circular defect here that has another
2 smaller, um, unnatural opening here, and this is
3 actually the border from the outside of the un --
4 unnatural opening, and this area here that all --
5 that looks very much like honeycomb, actually kind of
6 is honeycomb.

7 Um, our skull is -- is made up, um --
8 it's kind of a sandwich between hard, flat bone
9 on the outside, hard, flat bone on the inside,
10 with a honeycomb type of bone in the middle. And
11 it's through this honeycomb type of bone, um,
12 that there's -- there's fat, and there's blood
13 vessels and -- and so on.

14 And, um, what you're looking at here is
15 the in -- internal portion of the skull. We
16 don't see the -- the outside of the skull, but
17 what you're looking at is kind of the inside of a
18 crater where the inside of the skull bone here is
19 gone. It's missing. And you're looking directly
20 into the honeycomb portion of the skull.

21 Q All right. If you would turn to the next
22 exhibit, um, 392, I believe?

23 A Yes, sir.

24 Q And what is depicted in Exhibit 392 then?

25 A What we are looking at here is -- is, essentially,

1 the flip side of -- of what we were just looking at.
2 We are looking at the three bones, but this time from
3 the outside of the skull.

4 And what I will call your attention to
5 is the circular or crescent-shaped opening
6 reflected on the outside of the skull. This is,
7 essentially, just above where that honeycomb bone
8 was on the inside of the skull that we just
9 looked at.

10 Q Now, I also note, in addition to the, uh, couple
11 of different colored, uh, dots on that, there
12 also appears to be an arrow, uh, on Exhibit 392?
13 Do you know what that is?

14 A That's correct. I believe that is a -- a copper
15 marker that was affixed there by a representative of
16 the Wisconsin Crime Laboratory.

17 Q Mr. Olsen?

18 A I believe so.

19 Q All right. If we could direct your attention,
20 then, to, uh, the next exhibit? I believe it
21 would be 393?

22 A May I, uh, just return for one moment?

23 Q Oh, sure. I'm sorry if I'd interrupted you.

24 A No, that's -- Um, we -- we mentioned before the,
25 um -- my attempt at marking, um, some of the bone

1 fragments, and what I would like to call your
2 attention to here, um, are these two different colors
3 of nail polish on this bone. The parietal fragment
4 with the defect --

5 Q Right.

6 A -- or the unnatural opening, and, um, an adjoining
7 parietal fragment showing the same two markings.

8 Q All right. And that's -- As you've said, that's
9 related to your color coding system --

10 A That's correct.

11 Q -- to assist you in, uh, recognizing what the
12 items are, and when you received them, and where
13 they came from?

14 A And -- and, additionally, um, whether there were any,
15 um, specific results, um, that I wanted to show on
16 that particular bone.

17 Q Exhibit 393? What is -- What is it that we are
18 looking at, uh, with respect to Exhibit 393?

19 A This is, uh, another part of the skull. This time
20 not from the left side of the skull, but from the
21 back side of the skull, and you're looking, uh,
22 again, at the internal portion, or the inside of the
23 skull bone, um, two different fragments that
24 re-approximate, that fit, um, together, and, um, an
25 area where you can see clearly a honeycomb appearance

1 to the bone, which means a portion of the inside,
2 between the outside of the skull and the inner skull
3 bone, is exposed.

4 Q And is there a name for this particular bone?

5 A This bone is known as the occipital bone,
6 o-c-c-i-p-i-t-a-l. And it's the bone you feel at the
7 back of your skull.

8 Q And, um, the, uh, area where this defect is, is
9 that the area which seems to be, uh -- our
10 attention seems to be directed to by virtue of
11 the, uh -- the, uh, triangular marker?

12 A That's correct.

13 Q And next exhibit, please? I believe this is
14 Exhibit 394?

15 A Yes, sir.

16 Q Uh, what is it that we're looking at here?

17 A This is, um, uh, a view of the same two bones, uh,
18 although, um, you get a better sense of the totality
19 of those two bones. Um, just by way of reference, I
20 will point your, uh, attention here to the inner
21 table of the skull, the inner margin of the skull,
22 and, again, this honeycomb bone between the inner and
23 outer tables of the skull that's exposed, and, again,
24 another copper-colored pointer pointing to this
25 unnatural opening.

1 Q Now, um, are you familiar with the phrase, uh,
2 "internal beveling"?

3 A Yes, I am, sir.

4 Q And could you tell us what that is?

5 A Internal beveling is kind of cratering. Um, it's,
6 um, where, um, there may be an opening. Um, for
7 example, if you take a -- a piece of drywall or
8 sheetrock and -- and you hammer something into it,
9 you're -- you're liable to have a -- a small hole on
10 the outside, but if you flip that -- that piece of
11 particle board around, you'd see a wider opening, or
12 a cratering on the opposite side. And that's,
13 basically, what we are seeing here on the internal
14 view of the skull bone at the back of the skull.

15 Q And so you were pointing, again, to the area
16 where you've identified it as a defect, and it's
17 indicated in this photo by the Crime Lab marker?

18 A It is. And the honeycomb appearance of the bone.

19 Q All right. Was there anything else about the
20 def -- this internal beveling or -- or this --
21 that you've earlier referred to it as a defect
22 that was unusual?

23 A Um, in the sense that, um, both of these defects, um,
24 the -- the cranial bones that were identified by me
25 were taken for x-ray in November of 2005, and, uh,

1 ten different x-ray films were taken, and the results
2 of those x-rays indicate, um, that there were what
3 are called radiopaque particles, or little areas on
4 x-ray that were much whiter than -- and much denser
5 than surrounding bone.

6 And when you look at these x-rays, those
7 little white flecks, the reason they are so white
8 in comparison with the surrounding bone is that
9 the x-rays, while they pass through bone, do not
10 pass through these other areas, and that's why
11 you have that whiter appearance in relationship
12 to the bone, itself.

13 Q So these -- this, uh, radiopaque or denser
14 material, which of the, uh -- of the, uh, bones
15 had the presence of this material? And the
16 parietal bone, or the occipital bone, or both?

17 A Both, sir.

18 Q All right. Um, next exhibit, please? I'd like
19 to step out a little bit from the, uh, trees and
20 get more of the overview, uh, forest perspective.
21 Um -- Well, before we do that, we have one last
22 internal photo. What is it that we're looking at
23 here with respect to this particular photo?

24 A We are looking at the flip side, or the outside of
25 that occipital bone, the bone at the back of the

1 skull that shows the unnatural opening. And what I
2 will point out here is the outside of that opening,
3 as well as the loss of a little bit of outer bone,
4 which is not unusual when bone is -- is burned as it
5 is in this case. The bone becomes very brittle and
6 fragile and it's not unusual to see some spawling off
7 of bone from the outer surface.

8 Q All right. Next exhibit, please? That would be
9 Exhibit 396?

10 A Yes, sir.

11 Q All right. Exhibit 396, uh, does that, uh,
12 generally depict the location of the parietal
13 defect as you observed it?

14 A Yes, sir, it does.

15 Q Uh, next one, please? What are we looking at
16 here? I take it this is, uh, Exhibit 397?

17 A Yes, it is. What we are looking at are two of three
18 fragments that could be re-approximated or re-fitted
19 from the left parietal bone. What I -- I'll call
20 your attention, again, to these vessel markings
21 telling me that this, in fact, comes from a parietal
22 bone, and, more specifically, call your attention to
23 the internal beveling or internal cratering, um, of
24 the parietal bone.

25 And what I'd like to call your attention

1 to are these four flecks or whiter areas depicted
2 on x-ray. Here's one. Here's another. Here's a
3 third. And here's a fourth.

4 Q Directing your attention to the one, uh, in the,
5 uh, bevel defect?

6 A Yes, sir.

7 Q Are, um, those, uh, dense, white specks or
8 particles, are those naturally occurring?

9 A They are not, sir.

10 Q When we say something is, um, radiopaque, uh, can
11 you give a -- a -- a layman's, um, understanding
12 of that term?

13 A Well, I am certainly not a radiologist, but it means
14 that the, um -- the x-rays, which are -- are not
15 visible to the naked eye, cannot penetrate whatever
16 that substance is. Uh, and in this case, can
17 penetrate the bone, but cannot penetrate these other,
18 uh, more dense substances.

19 Q All right. If you would, uh, take the next
20 exhibit? Exhibit 398?

21 A Yes, sir.

22 Q What are we looking at in Exhibit 398?

23 A We are looking at one of the, um, x-rays, one of the
24 ten x-rays, that was taken in November of 2005 of
25 selected, um, cranial fragments, and, uh, in

1 particular, I'd like to call your attention to some
2 of the sutures that we talked about before. The
3 irregular shape of these bones, um, but, in
4 particular, I'd like to focus on this bone up in the
5 upper left-hand corner.

6 Q All right. Now, what bone is it that we've
7 zoomed in now at the upper left-hand corner of
8 Exhibit 398? There are eight, uh -- eight bones
9 depicted, and we're looking at the one in the
10 upper left-hand corner, and, uh, what is it
11 that -- which bone -- First of all, is that the
12 parietal or occipital?

13 A That is the occipital fragment with the unnatural
14 opening.

15 Q All right. And, um, would you identify clearly,
16 then, the, um, uh, radiopaque dense particles
17 you've been talking about?

18 A Yes. Um, I focus your attention in this area within
19 and adjacent to the unnatural opening or defect. Um,
20 and, uh, in x-ray, when I look at the x-rays, I count
21 at least ten different particles. There may actually
22 be more.

23 Q All right. Thank you. Um, would you turn to the
24 next exhibit, please? This would be Exhibit 399?

25 A Yes, sir.

1 Q All right. Uh, and, uh, 399, uh -- What is
2 depicted on Exhibit 399?

3 A We are looking, uh, at the back, uh, of this graphic
4 skeleton. The back kind of from the left-hand side
5 of the skeleton and the approximate area of, uh,
6 where that occipital defect or opening is on the
7 bone. Uh, it related to the previous slide we just
8 saw of the x-ray.

9 This is the portion of the bone that
10 showed at least ten of those radiopaque or dense
11 particles adjacent to the defect.

12 Q All right. Excuse me. All right. Uh, Doctor,
13 in terms of, um, these defects, were you able at
14 all, based on your findings, to determine a
15 particular order which these defects may have
16 occurred?

17 A No, sir.

18 Q Are these naturally occurring defects in the
19 human condition?

20 A They are most certainly not.

21 Q Why not?

22 A Um, based on the -- It's not what our bone looks
23 like. It's not what our skull bone looks like. We
24 may have tiny openings for the passage of blood
25 vessels, but we do not have openings that, um, are

1 this large or that cause, um, the outer or inner
2 tables of the skull, um, to be fractured away or to
3 expose the honeycomb bone in between the outer and
4 inner layers of the -- of the skull.

5 Q In your opinion, Doctor, did these defects exist
6 before the burning episode or did they occur
7 after?

8 A In my professional opinion these defects occurred
9 prior to or before the bone epi -- the burning
10 episode. Before.

11 Q Tell us why?

12 A Um, as I looked at the bone, uh, it's always
13 important to look at the distribution of burning and
14 the color on the bones, and, um, inside the defects,
15 uh, the cratering and the honeycomb portion of the
16 inside of the skull is of the same color as the
17 outside burned portion and the inside burned portion.
18 And based on that observation, it is my professional
19 opinion that these defects occurred prior to the
20 burning episode.

21 Q What does the presence of the internal beveling,
22 coupled with the localized radiopaque particles
23 on the parietal and occipital bones, signify to
24 you?

25 A To me, the -- those defects, and -- and what those

1 defects look like, signifies, um, what happens to
2 skull bone when it's subjected to a gunshot or
3 gunshots.

4 Q I have a few, uh, questions here of -- to
5 conclude. Uh, before I do, Doctor, you mentioned
6 something about the concept of postcranial
7 remains, uh, and having described them as below
8 the head. What other postcranial remains, uh,
9 were you able to identify as coming from the area
10 behind the, uh, garage that we've been referring
11 to as the burn pit?

12 A I would, um -- I would say that virtually every part
13 of the skeleton -- Um, obviously, there were no
14 entire bones that were found, but at least a fragment
15 or more of almost every bone below the neck was
16 recovered in that burn pit. Um, one bone that's
17 conspicuously absent, uh, are the left and right
18 kneecaps, for example, but that is not surprising to
19 me given that those bones were made up almost
20 exclusively of that honeycomb, very fragile bone,
21 that I would expect not to survive, um, a burning
22 episode. So it's not surprising to me that I've not
23 found evidence of -- of the kneecaps, but virtually
24 every other bone below the neck, um, I found evidence
25 for.

1 Q Uh, next exhibit, please? I'm showing you what
2 has been, uh, marked for identification purposes
3 as Exhibit 3 -- um, 400?

4 A Yes, sir.

5 Q And with respect to Exhibit 400, is this, um,
6 representative of the variety of human bone that
7 you found in this area?

8 A Yes, sir.

9 Q So you have some rib bone, some hand, some legs,
10 clavicle --

11 A There is --

12 Q -- or shoulder bones?

13 A Yes. Um, obviously, no entire bone, but, uh, enough,
14 um, of a bone or bones -- uh, enough of the
15 anatomical landmark that I can say this is part of
16 the spine, or this is part, uh, of a rib, or this is
17 part of a -- a collarbone. Yes, I can.

18 Q Now, there were some other bones that you found
19 that you weren't completely sure were human or
20 not; is that correct?

21 A That is correct.

22 Q Let's talk a little bit about that, if you'd
23 like, all right? Um, and we'll talk about them
24 in -- in this context, other than, uh, damage
25 caused by fire or gunshot, as you've, uh, told us

1 about, what other bones did you find that had
2 other indicators of -- of damage or unnatural
3 occurring injury to them?

4 A There were several other bones whose origin, uh, I
5 could not be sure of. In other words, I was not
6 sure, uh, that the bones were definitely human.

7 Q I'll get to that in a minute.

8 A Okay.

9 Q If you would just describe for us, first of all,
10 what the possibility or probability -- What --
11 Describe the bone that you have, uh, pictured in
12 your mind right now, and then we'll talk about
13 it.

14 A There -- there is one bone fragment in particular.
15 Uh, part of a bone shaft. That kind of tubular,
16 cylindrical portion of a bone is probably not more
17 than about two or two-and-a-half inches, um, that
18 shows evidence of cut marks and, of, uh, a saw cut as
19 well.

20 Q All right.

21 A And that bone is -- is, um, burned to the point of
22 being calcined. In other words, its color has moved
23 beyond black, but to whitish-gray.

24 Q All right. Now, with respect to that particular
25 bone, uh, can you say to a reasonable degree of

1 scientific certainty that that bone shaft
2 fragment is a human bone?

3 A I cannot, sir.

4 Q Um, did you find any evidence of a, uh -- of the
5 superior aspect of an iliac blade?

6 A Uh, yes, I did. And, um, for everyone in the room
7 but me, I'll show you where that is.

8 Q That's my next question.

9 A And, um --

10 Q Thank you. Bail me out.

11 A The, um -- The pelvis is made up of three different
12 bones; the left hip bone, the right hip bone, and the
13 sacrum, which is the bone that sits at the base of
14 the spine and actually is the lowermost portion of
15 the spine. And the iliac crest is this top area
16 here. What you actually feel, if you rub your hand
17 on your hip bone, that's known as the iliac crest.

18 Q All right. Now, the bone that you suspected to
19 be the iliac crest, can you say to a reasonable
20 degree of scientific certainty that that, uh, is
21 human bone?

22 A No, sir, I cannot.

23 Q Did you find evidence, uh -- or -- of a bone
24 that's referred to as the sacral iliac
25 articulation?

1 A Actually, those are two bones. It's where the right
2 half of the sacrum, or the lowermost part of the
3 spine, um, articulates -- it's actually adjoined --
4 with the right side of the hip bone.

5 Q And in terms of that, uh, suspected bone
6 fragment, can you say to a reasonable degree of
7 scientific certainty that that was human bone?

8 A Um, I cannot.

9 Q Doctor, were you able to perform any other tests,
10 uh, on these bones to determine if they were of
11 human origin?

12 A Uh, no, there were no other tests that I performed.

13 Q And why is that?

14 A Um, I did not, uh -- there, um, are -- There is the
15 potential for, um, using, um, microscopes to look,
16 for example, to try and confirm if suspected human
17 bone might actually be human bone or animal bone, but
18 given the condition of the remains, I did not
19 believe, um, that cutting into the bone, uh, that
20 they would survive that -- those kinds of tests, and
21 so I did not perform them.

22 Q Did you make an effort to, have, um, um, several
23 bone fragments, uh, submitted to the FBI
24 Laboratory to attempt further identification?

25 A Yes, sir, I did.

1 Q Based upon your examination of the bones and the
2 material that you had, did you find evidence of
3 any heman (phonetic) human bone that was
4 identified as being collected from a site other
5 than the burn pit behind the defendant's garage?

6 A Yes, sir, I did.

7 Q Tell us about that?

8 A There, uh -- Human bone also was found in and among
9 material that was collected from, uh, what was
10 designated "Burn Barrel No. 2".

11 Q All right. And what type of bone fragment do you
12 recall as having come from that particular burn
13 barrel?

14 A There was a portion of a -- a scapula or a shoulder
15 blade, um, some long bone fragments, um, a possible
16 hand bone, metacarpal, and I believe there was a
17 fourth representation but I don't remember. Um, I
18 certainly can check my notes if you'd like.

19 Q Uh, would it -- Spine bone, perhaps?

20 A Yes. Vertebral spine. Thank you.

21 ATTORNEY BUTING: Sorry. What was that?

22 Q (By Attorney Fallon) Could you -- Counsel didn't
23 hear that.

24 A Part of -- Part of the spine. A vertebral element.

25 ATTORNEY BUTING: Vertebral?

1 THE WITNESS: Yeah.

2 ATTORNEY BUTING: Okay.

3 Q (By Attorney Fallon) All right, Doctor. The
4 opinion that the remains were those of an adult
5 female less than 30 to 35 years of age, do you
6 hold that opinion to a reasonable degree of
7 scientific certainty?

8 A Yes, I do.

9 Q The opinion that the internal beveling observed
10 in the left parietal bone is characteristic of a
11 gunshot or bullet entrance wound, do you hold
12 that opinion to a reasonable degree of scientific
13 certainty?

14 A Yes, sir, I do.

15 Q The opinion that -- The opinion that the internal
16 beveling observed in the occipital bone left of
17 the midline, is characteristic of gunshot or
18 bullet entrance wound, do you hold that opinion
19 to a reasonable degree of scientific certainty?

20 A Yes, sir, I do.

21 Q The opinion that the internal beveling observed
22 in the left parietal bone and in the occipital
23 bone occurred before the burning episode, do you
24 hold that opinion to a reasonable degree of
25 scientific certainty?

1 A Yes, sir, I do.

2 Q Finally, Doctor, the opinion that the manner of
3 death for this person was homicidal violence, do
4 you hold that opinion to a reasonable degree of
5 scientific certainty?

6 A Yes, I do.

7 ATTORNEY FALLON: Um, I would move into
8 evidence the exhibits that I've had this witness
9 identify. Upon their receipt, would pass the
10 witness for cross-examination.

11 THE COURT: Any objection to the exhibits?

12 ATTORNEY STRANG: I have no objection to
13 any of the exhibits.

14 THE COURT: Very well. Court will order,
15 uh, all of the exhibits testified to by this witness
16 admitted, and at this time we're going to take our
17 afternoon break. Uh, members of the jury, I'll
18 remind you not to discuss the case during the break.
19 Uh, and we'll resume cross-examination after the
20 break.

21 (Jurors out at 2:42 p.m.)

22 THE COURT: You may be seated. Counsel,
23 I'll try not to, uh, interrupt you in your
24 examination for a stretch break, but, uh, science
25 class is pretty heavy for the jury, so when I look

1 at them and think they need a break, I'll try to do
2 it at a logical time.

3 ATTORNEY STRANG: You should feel free
4 to do that.

5 THE COURT: All right. We'll see you at
6 3:00.

7 (Recess had at 2:43 p.m.)

8 (Reconvened at 3:00 p.m.; jurors present.)

9 THE COURT: You may be seated. Is
10 someone going to get the witness?

11 ATTORNEY FALLON: I believe so.

12 THE COURT: All right. Mr. Strang, you
13 may begin.

14 ATTORNEY STRANG: Thank you, Your Honor.

15 **CROSS-EXAMINATION**

16 BY ATTORNEY STRANG:

17 Q Dr. Eisenberg, um, let's start by agreeing, if we
18 can, that in all the work you did on this case
19 with human bone, possible human bones, suspected
20 human bone, all of the work which you've
21 testified, you had no evidence that more than one
22 person was involved in terms of a contributor of
23 bones?

24 A Are you asking me whether or not more than one
25 individual was represented by what I examined?